

What is claimed is:

1. An optical transmission system, comprising an optical communication apparatus, a communicating party of said optical communication apparatus, and a monitor for performing monitoring
5 of optical signals transmitted and received between said optical communication apparatus and said communicating party;

wherein said optical communication apparatus comprises:

optical branching means for branching optical signals to
be transmitted to said communicating party and optical signals
10 received from said communicating party; and

conducting means for conducting said optical signals to
be transmitted and said received optical signals that have been
branched by said optical branching means, to said monitor, and
said monitor performs monitoring of the data contents of
15 said optical signals to be transmitted and said received optical
signals that have been conducted from said conducting means.

2. The optical transmission system according to claim 1,
wherein said conducting means comprises:

a first transmit interface for conducting to said monitor
20 said optical signals to be transmitted; and

a second transmit interface for conducting to said monitor
said received optical signals, and

said monitor consists of two mutually independent monitors:
a monitor for performing monitoring of the data contents of said
25 optical signals to be transmitted that have been conducted from
said first transmit interface, and a monitor for performing

monitoring of the data contents of said received optical signals that have been conducted from said second transmit interface.

3. An optical transmission system, comprising an optical communication apparatus, a communicating party of said optical communication apparatus, and a monitor for performing monitoring of optical signals transmitted and received between said optical communication apparatus and said communicating party,

wherein said optical transmission system comprises an optical external conducting apparatus, located between said optical communication apparatus and said communicating party, that includes optical branching means for branching said optical signals and conducting means for conducting said optical signals that have been branched by said optical branching means, to said monitor, and

- 15 said monitor performs monitoring of the data contents of said optical signals that have been conducted from said conducting means.

4. The optical transmission system according to claim 3, wherein said conducting means comprises:
- 20 a first transmit interface for conducting optical signals transmitted by said optical communication apparatus from among said branched optical signals, to said monitor; and
- a second transmit interface for conducting optical signals transmitted by said communicating party from among said branched optical signals, to said monitor, and
- 25

said monitor consists of two mutually independent monitors:
a monitor for performing monitoring of the data contents of optical
signals transmitted by said optical communication apparatus that
have been conducted from said first transmit interface, and a
5 monitor for performing monitoring of the data contents of optical
signals transmitted by said communicating party that have been
conducted from said second transmit interface.

5. The optical transmission system according to claim 1,
wherein said data contents are signaling information necessary
10 for data exchange.

6. A monitoring method for an optical transmission system
comprising an optical communication apparatus, a communicating
party of said optical communication apparatus, and an external
monitor for performing monitoring of optical signals transmitted
15 and received between said optical communication apparatus and
said communicating party, comprising:

in said optical communication apparatus, an optical
branching step of branching optical signals to be transmitted
to said communicating party and optical signals received from
20 said communicating party, and a conducting step of conducting
said optical signals to be transmitted and said received optical
signals that have been branched in said optical branching step,
to said external monitor; and

in said monitor, a monitoring step of performing monitoring
25 of the data contents of said optical signals to be transmitted

and said received optical signals that have been conducted in said conducting step.

7. A monitoring method for an optical transmission system comprising an optical communication apparatus, a communicating party of said optical communication apparatus, and an external monitor for performing monitoring of optical signals transmitted and received between said optical communication apparatus and said communicating party, comprising:

in an optical external conducting apparatus located between said optical communication apparatus and said communicating party, an optical branching step of branching said optical signals, and a conducting step of conducting said optical signals that have been branched in said optical branching step, to said external monitor; and

in said monitor, a monitoring step of performing monitoring of the data contents of said optical signals that have been conducted in said conducting step.

8. The monitoring method according to claim 6, wherein said data contents are signaling information necessary for data exchange.

9. An optical communication apparatus, comprising:
optical branching means for branching optical signals to be transmitted to a communicating party and optical signals received from said communicating party; and

conducting means for conducting said optical signals to be transmitted and said received optical signals that have been

branched by means of said optical branching means, to a monitor
for performing monitoring of the data contents of optical signals.

10. The optical communication apparatus according to claim 9,
wherein said conducting means comprises:

5 a first transmit interface for conducting to said monitor
said optical signals to be transmitted; and

a second transmit interface for conducting to said monitor
said received optical signals, and

wherein said monitor consists of two mutually independent
10 monitors: a monitor for performing monitoring of the data contents
of said optical signals to be transmitted that have been conducted
from said first transmit interface, and a monitor for performing
monitoring of the data contents of said received optical signals
that have been conducted from said second transmit interface.

15 11. The optical communication apparatus according to claim 9,
wherein said data contents are signaling information necessary
for data exchange.

12. An optical external conducting apparatus, located between
an optical communication apparatus and a communicating party
20 of said optical communication apparatus, comprising:

optical branching means for branching optical signals
transmitted and received between said optical communication
apparatus and said communicating party; and

conducting means for conducting said optical signals that
25 have been branched by said optical branching means to a monitor

for performing monitoring of the data contents of said optical signals.

13. The optical external conducting apparatus according to claim 12, wherein said conducting means comprises:

5 a first transmit interface for conducting optical signals transmitted by said optical communication apparatus from among said branched optical signals, to said monitor; and

10 a second transmit interface for conducting optical signals transmitted by said communicating party from among said branched optical signals, to said monitor, and

15 said monitor consists of two mutually independent monitors: a monitor for performing monitoring of the data contents of optical signals transmitted by said optical communication apparatus that have been conducted from said first transmit interface, and a
20 monitor for performing monitoring of the data contents of optical signals transmitted by said communicating party that have been conducted from said second transmit interface.

14. The optical external conducting apparatus according to claim 12, wherein said data contents are signaling information
20 necessary for data exchange.